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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/787,352

02/26/2004

Bernard Simon

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7590

08/28/2006

MACMILLAN, SOBANSKI & TODD, LLC
ONE MARITIME PLAZA - FIFTH FLOOR
720 WATER STREET
TOLEDO, OH 43604

EXAMINER

JIMENEZ, MARC QUEMUEL

ART UNIT

PAPER NUMBER

3726

DATE MAILED: 08/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/787,352

Applicant(s)

SIMON, BERNARD

Examiner

Marc Jimenez

Art Unit

3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-9 and 12-20** are rejected under 35 U.S.C. 102(b) as being anticipated by Miller (US4003273).

Miller teaches a method for producing a Ravigneaux gearset having gearset parameters that permit assembly of a gearset including mutually identical short pinions **P1**, spaced at equal radial distance from and equal angular intervals about an axis, meshing with a sun gear **S2**, mutually identical long pinions **P2** each meshing with two adjacent short pinions **P1**, a long sun gear **S1** and ring gear **A1**, the method comprising the steps of: determining a number of gear teeth for each gear and pinion that would in combination produce desired gear ratios (col. 2, lines 222-29); determining current gearset parameters including distances and angles relating the positions of the gears and pinions (col. 6, lines 2-12); determining, for a predetermined angular rotation of a selected gear or pinion, and using the current gearset parameters, an error representing a difference in phases of a tooth on the selected gear or pinion into its mesh cycle (col. 2, lines 25-29 and col. 1, line 14, "slip loss" is an error that needs to be fixed), a first phase being determined along a first portion of a drive path of meshing gears and pinions, a second

phase determined along a second portion of the drive path distinct from the first portion; repetitively changing one or more of the current gearset parameters (col. 2, lines 25-28, “in order to achieve high gear efficiency in keeping with the best planetary gear design practice”) to determine a set of optimal gearset parameters for which the error is in the range between zero and a magnitude of single pair backlash of the gearset; and producing a gearset having the optimal gearset parameters. Note also that the figure 2 gear assembly is modified to the one shown in figure 4. Therefore, there are determining steps of a predetermined angular rotation of a selected gear or pinion and repetitively changing one or more of the gearset parameters (changing the parameters of figure 2 to that of figure 4) to determine a set of optimal gearset parameters (figure 4) and producing a gearset having the optimal gearset parameters (figure 4). Regarding claims 3-9 and 12-20, it is noted that in designing gearsets as shown in figure 4, there are clearly designing, sizing, selecting, and determining steps to create the desired gearset. It is noted that Miller teaches the same gearset arrangement as in the instant application. In comparing figure 4 of Miller to figure 3 of applicant’s drawings, the same short and long pinion arrangement is shown where the short pinions contact the long pinions and are arranged symmetrically around the sun gears.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

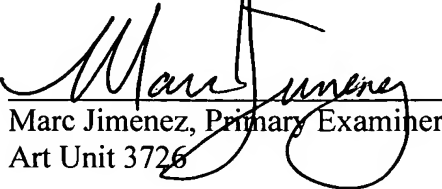
4. **Claims 10, 11, 21 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller.

Miller teaches the invention cited above with the exception of having four long pinions and four short pinions or having five long pinions and five short pinions. At the time of the invention, it would have been an obvious matter of design choice to a person of ordinary skill in the art, to have used four long pinions and four short pinions or having five long pinions and five short pinions because applicant has not disclosed that four long pinions and four short pinions or having five long pinions and five short pinions provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with either the three long and short pinions taught by Miller or the claimed four long pinions and four short pinions or having five long pinions and five short pinions because either number of pinions perform the same function of producing transmission equally well. Furthermore, it would have been obvious to one of ordinary skill in the art, at the time of the invention, to have provided additional pinions, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Jimenez whose telephone number is (571) 272-4530. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Marc Jimenez, Primary Examiner
Art Unit 3726

MJ
8-17-06